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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,797	07/08/2005	Masahiko Yahagi	Q88974	4125

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EXAMINER
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AFSHAR, KAMRAN

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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12/20/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/541,797

Applicant(s)

YAHAGI, MASAHIKO

Examiner

Kamran Afshar 571-272-7796

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07/08/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                                  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/08/2005</u> . | 6) <input type="checkbox"/> Other: _____   |

## DETAILED ACTION

**This Office Action is response on the Preliminary Amendment filed on 8/28/2007.**

### *Specification*

1. The disclosure is objected to because of the following informalities:

CFR 1.78(a) (iii) requires the sentence in any non-provisional application

(iii) If the later-filed application is a nonprovisional application, the reference required by this paragraph must be included in an application data sheet (§ 1.76 <appxr 1\_76.htm>), or the specification must contain or be amended to contain such reference in the first sentence(s) following the title.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 7-11, 17-21, 27-31, 37-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Sinnarajah (U.S. Pub. No.: 2004/0203336 A1).

With respect to claims 1, 11, 21, 31, Sinnarajah teaches a network having a base station that uses a predetermined type of a communication channel to distribute content (See Sinnarajah e.g. a wireless communication network, broadcasting ( or distributing) content service, switch in type of communication channel i.e. type 1: shared (or common) channel , type 2: individual (or dedicated) channel or, Page 2, ¶ [0011]) or / a channel switching control method (See Sinnarajah e.g. Page 2, switch in type of communication channel i.e. type 1: shared (or common or PtM) channel , type 2: individual (or dedicated or PtP) channel or, Page 2, ¶ [0011]) / or a content distribution system (See Sinnarajah e.g. 100, 102 of

communication channel i.e. type 1: shared (or common or PtM) channel , type 2: individual (or dedicated or PtP) channel or, Page 2, ¶ [0011]) / or a content distribution system (See Sinnarajah e.g. 100, 102 of Fig. 1, Page communication system, broadcast service, Page 2, 4-5 of ¶ [0034], ) having a base station (See Sinnarajah e.g. 110s of Fig. 1) that uses a predetermined type of a communication channel to distribute content as its communication data (See Sinnarajah e.g. examiner takes: broadcast content or broadcast program, Page 3, Lines 4-9 of ¶ [0046]) to a mobile station (See Sinnarajah e.g. subscriber station, page 3, Lines 4-9 ¶ [0046]) , wherein the base station includes channel switching determination means (See Sinnarajah e.g. 606 of Fig. 6 and Also see 1600-1624 of Fig. 16) configured to determine (See Sinnarajah e.g. determines change in condition (i.e. change in level of transmit power, number of subscriber-station), 604 of Fig. 6) whether the type of the communication channel sent between the base station (See Sinnarajah e.g. the base station changes between shared (or common) / individual (or dedicated or PtP) channel, Page 6, Lines 9-12 of ¶ [0078]) and the mobile station is switched based on the power for the distribution of the content to the mobile station (See Sinnarajah e.g. determines change in condition (i.e. 604 of Fig. 6, change in level of transmit power, number of subscriber-station) Page 6, Lines 1-12 of ¶ [00079], Also see steps 602-608 of Fig. 6 and 1600-1624 of Fig. 16).

Regarding claims 7, 17, 27, 37, Sinnarajah teaches channel switching determination means is configured to determine whether to switch the type of the communication channel (See Sinnarajah e.g. 606 of Fig. 6 and Also see 1600-1624 of Fig. 16) between the base station and the mobile station (See Sinnarajah e.g. the base station changes between shared (or common) / individual (or dedicated or PtP) channel, Page 6, Lines 9-12 of ¶ [0078]) in response to a change in the number of the mobile station (See Sinnarajah e.g. determines change in condition (i.e. 604 of Fig. 6, change in level of transmit power, number of subscriber-station) Page 6, Lines 1-12 of ¶ [00079], Also see steps 602-608 of Fig. 6 and 1600-1624 of Fig. 16).

Regarding claims 8, 18, 28, 38, Sinnarajah teaches channel switching determination means is configured to determine whether to switch the type of the communication channel (See Sinnarajah e.g. 606 of Fig. 6 and Also see 1600-1624 of Fig. 16) between the base station and the mobile station (See Sinnarajah e.g. the base station changes between shared (or common) / individual (or dedicated or PtP)

channel, Page 6, Lines 9-12 of ¶ [0078]) in response to a change in the allowable number of the stations that receive a service of distributing the content (See Sinnarajah e.g. determines change in condition (i.e. 604 of Fig. 6, change in level of transmit power, number of subscriber-station, a prescribed threshold) Page 6, Lines 1-12 of ¶ [00079], Also see steps 602-608 of Fig. 6 and 1600-1624 of Fig. 16).

Regarding claims 9, 19, 29, 39, Sinnarajah teaches channel switching determination means is configured to determine whether to switch the type of the communication channel (See Sinnarajah e.g. 606 of Fig. 6 and Also see 1600-1624 of Fig. 16) between the base station and the mobile station (See Sinnarajah e.g. the base station changes between shared (or common) / individual (or dedicated or PtP) channel, Page 6, Lines 9-12 of ¶ [0078]) in response to a change in the allowable number of the stations that receive services other than that of distributing the content (i.e. 604 of Fig. 6, change in level of transmit power, number of subscriber-station) Page 6, Lines 1-12 of ¶ [00079], Also see steps 602-608 of Fig. 6 and 1600-1624 of Fig. 16).

Regarding claims 10, 20, 30, 40, Sinnarajah teaches switching of the type of the communication channel (See Sinnarajah e.g. 606 of Fig. 6 and Also see 1600-1624 of Fig. 16) sent between the base station and the mobile station is performed in the service of distributing the content (See Sinnarajah e.g. the base station changes between shared (or common) / individual (or dedicated or PtP) channel, Page 6, Lines 9-12 of ¶ [0078]).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3, 12-13, 22-23, 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinnarajah (U.S. Pub. No.: 2004/0203336 A1) in view Black (U.S. 6, 594,501 B2).

Regarding claims 2, 12, 22, 22, 32, Sinnarajah, teach everything as discussed above in the rejected claims 1, 11, 21, 31. Sinnarajah further teaches the channel switching determination means (See Sinnarajah e.g. 606 of Fig. 6 and Also see 1600-1624 of Fig. 16) is configured to determine (See Sinnarajah e.g. determines change in condition (i.e. change in level of transmit power, number of subscriber-station), 604 of Fig. 6) whether the communication channel is switched from a first communication channel that is being used for the distribution to a second channel whose type is different from that of the first communication channel (See Sinnarajah e.g. the base station changes between shared ( or common) / individual (or dedicated or PtP) channel, Page 6, Lines 9-12 of ¶ [0078]) based on the transmission power and in the case where the second communication channel is used for the distribution (See Sinnarajah e.g. determines change in condition (i.e. 604 of Fig. 6, change in level of transmit power, number of subscriber-station) Page 6, Lines 1-12 of ¶ [0079], Also see steps 602-608 of Fig. 6 and 1600-1624 of Fig. 16). However, Sinnarajah does not explicitly teach the downlink transmission power of the first communication channel and the downlink transmission power of the second communication channel. In an analogous field of endeavor, Black teaches a power control system that can be used to limit the transmission power over both the forward and reverse links (or **downlink** i.e. transmissions from the base station to a subscriber station, and the reverse ( or uplink i.e. link refers to transmissions from a subscriber station to the base station) (See Black e.g. Co. 3, 49-56). Further, Black teaches the concept of the downlink transmission power of the first communication channel and the downlink transmission power of the second communication channel (See Black e.g. power transmission, first and second channels Co. 1, Lines 55-60, 106 of Fig. 1, 408, 426 of Fig. 4). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Black to Sinnarajah to provide a system (or network) or a method of controlling transmission power includes receiving a first to second channel power ratio, adjusting the

power ratio if a combined power of a plurality of channels exceeds a threshold, the channels including the first and second channels, and computing gain of the first channel as a function of the power ratio so that to achieve a desire quality service as suggested (See Black e.g. Co. 1, Lines 55-60 and Lines 41-43).

Regarding claims, 3, 13, 23, 33, it is obvious that the channel switching determination means (See Sinnarajah e.g. 606 of Fig. 6 and Also see 1600-1624 of Fig. 16) is configured to determine that the communication channel is switched See Sinnarajah e.g. the base station changes between shared (or common) / individual (or dedicated or PtP) channel, Page 6, Lines 9-12 of ¶ [0078]) from the first communication channel to the second communication channel (See Sinnarajah e.g. determines change in condition (i.e. 604 of Fig. 6, change in level of transmit power, number of subscriber-station) in the case where the downlink transmission power of the second communication channel is less than the downlink transmission power of the first communication channel (See Black e.g. controlling transmission power includes receiving a first to second channel power ratio, adjusting the power ratio if a combined power of a plurality of channels exceeds a threshold, Co. 1, Lines 55-60).

6. Claims 4, 14, 24, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinnarajah, Black and further in view of Hayakawa (U.S. Patent 6,708,042 B1).

Regarding claims 4, 14, 24, 34, Sinnarajah, Black, teach everything as discussed above in the rejected claims 1, 11, 21, 31. Sinnarajah further teaches the channel switching determination means (See Sinnarajah e.g. 606 of Fig. 6 and Also see 1600-1624 of Fig. 16) is configured to determine that the communication channel is switched (See Sinnarajah e.g. the base station changes between shared (or common) / individual (or dedicated or PtP) channel, Page 6, Lines 9-12 of ¶ [0078]) includes means for switching the communication channel from the first communication channel to the second communication channel (See Sinnarajah e.g. determines change in condition (i.e. 604 of Fig. 6, change in level of transmit power, number of subscriber-station) Page 6, Lines 1-12 of ¶ [00079], Also see steps 602-608 of Fig. 6 and 1600-1624 of Fig. 16) when determining to perform the channel switching from the first communication channel to second communication channel (See Sinnarajah e.g. determines change

in condition (i.e. 604 of Fig. 6, change in level of transmit power, number of subscriber-station). Black further teaches that the total of the downlink transmission power of the base station based on a threshold (See Black e.g. Co. 1, Lines 55-60, 408, 420 of Fig. 4). However, Sinnarajah and Black are silent that the downlink transmission power of the base station does not exceed the upper limit. In an analogous field of endeavor, Hayakawa teaches the concept of the downlink transmission power of the base station does not exceed the upper limit (See Hayakawa e.g. transmitting power  $P_p$  may not exceed the upper limit  $P$  of transmitting power of the base station, Co. 17, Lines 31-37, Steps 413-414 of Fig. 4, also See Fig. 8). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Hayakawa to Black and Sinnarajah to provide a system or a method to monitor (or watched) the status of communication congestion of mobile stations engaged in communication is being watched at the base station and the upper limit  $P$  may be allowed to be determined according to the extent of communication congestion and the upper limit  $p$ , or the status of communication congestion of mobile stations engaged in communication may be watched via the summation of the upper limit  $P$  of the base station's communication power level against each respective mobile station communicating with the base station as suggested (See Hayakawa e.g. Co. 3, Lines 37-45).

7. Claims 5-6, 15-16, 25-26, 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinnarajah, Black, Hayakawa further in view of Takano (U.S. Patent 6,934,556 B2).

Regarding claims 5-6, 15-16, 25-26, 35-36, Sinnarajah, Black, Hayakawa teach everything as discussed above in the rejected claims 1, 11, 21, 31. Sinnarajah further teaches communication channel is an individual channel that is individually assigned to the mobile station, the second communication channel is a common channel that is commonly assigned to the mobile station (See Sinnarajah e.g. the base station changes between shared (or common) / individual (or dedicated or PtP) channel, Page 6, Lines 9-12 of ¶ [0078]), and the channel switching control means is configured to in terms of the transmission power thereof to complete the channel switching from the individual channel to the



common channel (See Sinnarajah e.g. determines change in condition (i.e. 604 of Fig. 6, change in level of transmit power, number of subscriber-station) Page 6, Lines 1-12 of ¶ [00079], Also see steps 602-608 of Fig. 6 and 1600-1624 of Fig. 16). However, Sinnarajah, Black, Hayakawa are silent that sequentially perform the channel switching for the individual channel in the ascending order / or descending in terms of the (downlink) transmission power. In an analogous field of endeavor, Takano teaches the concept of the sequentially perform the channel switching for the individual channel in the ascending order / or descending in terms of the (downlink) transmission power (See Takano e.g. descending order, ascending order, downlink transmission, Co. 7, Lines 11-23 and Lines 36-45). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Takano to Sinnarajah, Black, Hayakawa to provide a system or a method of channel allocation (or switching) and or a power control method capable of preventing the transmission power from exceeding a power rating of a base station so that the total throughput is improved and intra-cell interference and inter-cell interference are controlled as suggested (See Takano e.g. Co. 3, Lines 24-19).

### *Conclusion*

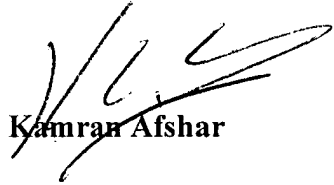
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Miyoshi (U.S. 6,847,828 B2).
- b) Waldroup (U.S. 5,077,828).
- c) Chen (U.S. Pub. No.: 2003/0114167 A1).
- d) Takahiro (U.S. Pub. No.: 2002/0114295 A1).
- e) Sinnarajah (U.S. 7,277,694 B2).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Eng, George** can be reached @ (571) 272-3984. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Kamran Afshar**